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FEATURED APPLICATION

Performance Evaluation of Carryover Using Reserpine in Human Plasma by the Nexera UHPLC System

Shimadzu



High-speed, high-resolution analysis technology is now being used even in LC/MS/MS analysis of drugs in plasma using micro-level packed columns with particle sizes on the order of 2 μm . As diffusion in these micro-level packed columns is smaller than in conventional columns (5 μm), the peak heights are larger, allowing quantitation at higher sensitivity than ever before. While such high sensitivity analysis is now widely performed, autosampler carryover has become a problem because of the adverse effects on LC/MS/MS high-sensitivity analysis. Here, we introduce the results of the carryover evaluation of the Nexera SIL-30AC autosampler using the Nexera UHPLC (Ultra High Performance Liquid Chromatography) System and LC/MS/MS.

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WHAT'S NEW

Improving Intact Biogenic Protein Separations with Aeris WIDEPORÉ Core-Shell Columns

Phenomenex

Aeris WIDEPORÉ is a core-shell HPLC - UHPLC column designed to provide improved resolution of intact proteins larger than 10 kilodaltons (kDa) in molecular weight. The improved resolution of proteins is accomplished by the use of a core-shell particle morphology which minimizes protein band-spreading that occurs during diffusion in and out of the coreshell particle.

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Glycosylation Analysis by HILIC – N-Glyco Mapping of the ZP-Domain of Murine TGFR-3

Tosoh

Glycans play critical roles in physiological and pathological reactions ranging from immunity to cell signaling, development and death. Besides the interest of researchers in characterizing glycosylation patterns for structure/function analysis, the thorough characterization of glycosylation is a major quality parameter in the production of biotherapeutics.

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Using the CIA Advantage for Automated Cryogen-Free Analysis of Canister Air and Gas

Markes International

The CIA Advantage is an advanced system for the automated analysis of VOCs in air or gas sampled using canisters. This application note describes five CIA Advantage applications, demonstrating the system's ability to provide excellent analytical performance and versatility.

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Direct Determination of Sialic Acids in Glycoprotein Hydrolyzates by HPAE-PAD

Thermo Fisher Scientific

In this work, sialic acids are determined in five representative glycoproteins by acid hydrolysis followed by HPAE-PAD. Sialic acid determination by HPAE-PAD on a CarboPac PA20 column is specific and direct, eliminating the need for sample derivatization after sample preparation.

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DMABC Derivatization Agent Enables Improved Detection of Estradiol with ESI-MS

Sigma-Aldrich

Steroid hormones are derivatives of cholesterol and play an important role in a large variety of organisms, as they can have direct control over the gene expression. Clinical and environmental laboratories alike now have a vital interest in finding the most sensitive method for the analysis of steroid hormones, which are usually in matrices and so difficult to remove.

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Isolation of 2,2'-Furoin from a Crude Reaction Mixture

Buchi

Available from Buchi is an application note describing the isolation of 2,2'-Furoin from a crude reaction mixture, through an example of sample loading. Furoin is an organic compound and has been used as a plasticiser. The method uses the company's Sepacore cartridges.

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Analysis of Benzodiazepines in Urine and Whole Blood Using an Ultra Biphenyl Column

Restek

A rapid, sensitive method for the routine analysis of benzodiazepines in urine and whole blood was developed using a simple dilute-and-shoot methodology. This method, which uses an Ultra Biphenyl LC column and an API 4000 MS/MS detector, provides a fast 4.5 minute analysis which allows efficient monitoring of a broad range of benzodiazepines at therapeutic levels.

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UHPLC Separation and Determination of 17 Proteinogenic Amino Acids in Baby Food

Knauer

A rapid and sensitive UHPLC method, coupled with precolumn derivatization and UV detection, has been worked out to determine the amino acid concentrations and composition of baby food. Short columns with small particles are the most suitable way to prevent long equilibration and analysis times.

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